

Publication No. 2003/0064208 ("Yamada"). Applicants respectfully disagree with and traverse this rejection in view of at least the following arguments.

II. Arguments

Claims 1, 2, 5-7, and 11 stand rejected under 35 U.S.C. 103(a) as unpatentable over Ishimaru in view of Yamada. According to the Examiner, Ishimaru discloses an ink jet recording material comprising a water resistant support and an ink receptive layer on the support. Office Action, page 2. The ink receptive layer comprises inorganic particles, a hydrophilic binder, a water soluble metallic compound such as zirconium oxychloride, and a surfactant. *Id.* The Examiner acknowledges, however, that Ishimaru fails to disclose an amino acid in the ink receptive layer.

Yamada teaches an ink jet recording sheet comprising a support, a colorant receptive layer, and a surfactant in the colorant receptive layer. *Id.* Noting that the surfactant in the colorant receptive layer may be an amino acid, such as glycine, the Examiner concludes that one of ordinary skill in the art would have found it obvious to utilize the amino acid surfactant of Yamada as the surfactant in Ishimaru. *Id.* at 3, 4. The Examiner asserts that one of ordinary skill in the art would have been motivated to make such a modification: a) because Ishimaru and Yamada are analogous art ; and b) to control the surface properties of the ink receptive layer. *Id.* at 4. Applicants respectfully disagree for at least the following reasons.

To establish a prima facie case of obviousness, the Examiner must show that three basic criteria have been met. See M.P.E.P. § 2143. Specifically, the Examiner must establish: (1) that the prior art teaches or suggests all of the claim limitations; (2) that there is some teaching or suggestion in the prior art to make the modification; and

(3) that one of ordinary skill in the art would have had a reasonable expectation of success in making the asserted modification. *Id.* As shown below, Applicants respectfully submit that the Examiner has not established any of these three criteria.

Claim 1 recites,

An ink-jet recording sheet comprising a support having thereon an ink absorptive layer containing a multivalent metal compound which is coordinated with an amino acid.

Claim 1 (emphasis added). The Examiner has failed to establish that the applied prior art teaches or suggests the use of a multivalent metal atom that is coordinated with an amino acid. The phrase “multivalent metal compound that is coordinated with an amino acid” means that both a multivalent metal compound and an amino acid should be present such that they form a coordinated compound. As the Examiner will appreciate, the term, “coordinated compound” refers to compounds composed of a central metal atom or ion, generally a cation, surrounded by a number of negatively charged ions or molecules possessing lone pairs of electrons. Counter ions often surround the metal complex ion, causing the compound to have no net charge. The ions or molecules surrounding the metal are called ligands. Ligands are generally bound to the metal atom or ion by a coordinate covalent bond, and are thus said to be “coordinated” with the metal atom or ion.

Applicants respectfully submit that neither Ishimaru nor Yamada, alone or in combination, teaches or suggests an ink receptive layer comprising a multivalent metal atom that is coordinated with an amino acid, as claimed. Certainly Ishimaru, which is completely silent with respect to amino acids, cannot be said to teach or suggest the claimed ink receptive layer comprising a multivalent metal compound coordinated with

an amino acid. Furthermore, although Yamada discloses a colorant layer for an ink jet recording medium that may contain both a metal compound and a surfactant such as glycine, the reference does not teach or suggest that these components form a coordinated compound. Indeed, Yamada, like Ishimaru, is silent with respect to the use of any coordination compounds within an ink-receptive layer of a ink-jet recording medium.

Accordingly, Applicants submit that Ishimaru and Yamada, taken either alone or in combination, fail to teach or suggest all of the limitations of claim 1. Specifically, these references fail to teach or suggest a multivalent metal compound coordinated with an amino acid, as claimed. Moreover, given the failure of the applied references to teach or suggest the use of a multivalent metal-amino acid coordinated compound in an ink receptive layer of a ink jet recording medium, Applicants submit that these references provide no teaching or suggestion that would motivate one of ordinary skill in the art to modify Ishimaru so as to arrive at the presently claimed invention, much less with a reasonable expectation of success.

Accordingly, Applicants respectfully submit that the Examiner has failed to meet all of the burdens necessary to establish a prima facie case of obviousness under 35 U.S.C. §103(a). Thus, Applicants submit that the Examiner's rejection of claim 1 under §103(a) as being unpatentable over Ishimaru in view of Yamada is improper, and should be withdrawn. In addition, as claims 2, 5-7, and 11 depend from claim 1, the §103(a) rejection of these claims is also improper, and should be withdrawn.

III. Conclusion

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In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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